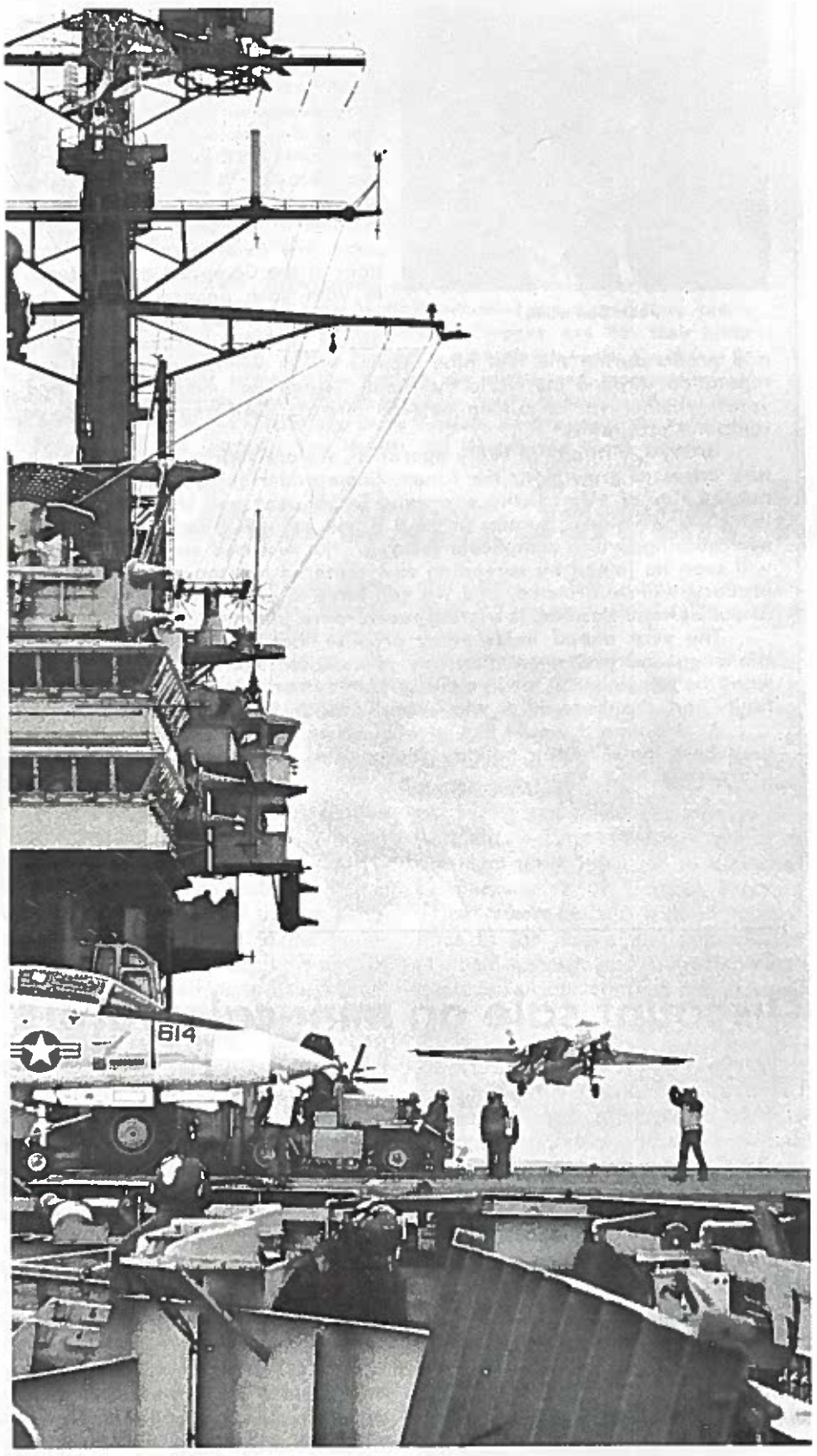
GRUMMAN plane news

Vol. 32, No. 22, Bethpage, N. Y., December 17, 1973



Sea trials for Tomcat. Three Navy-Grumman F-14s went aboard the USS Forrestal late last month for a week of intensive carrier suitability trials while the big carrier was operating off the Virginia coast. All-Navy flight crews put the Tomcat through a variety of tests, including touch-and-go landings (demonstrated here by Tomcat approaching Forrestal's flight deck), simulated wing-sweep and wing-flap failures on approach to determine how the F-14 responds in such emergency conditions, and several inertial navigation checkouts. The trials, which began on Nov. 26 and concluded Dec. 2, were described as "highly successful" by the Navy, according to Frank Edwards, director of Flight Acceptance Department.

Calls for stringent measures

Paxson sounds warning on material shortages

Shortages, a condition in the aerospace industry that gives rise to the twin specters of price hikes and product delays, are likely to become more severe in the months ahead, warns Bill Paxson, director of Procurement Management, unless stringent emergency measures are introduced throughout the Company. One of Paxson's aides, John Monahan, director of Central Purchasing, has been briefing representatives of the major operating departments in Grumman Aerospace and the Naval Plant Representative's Office and the message he's carrying is clear: THE ENERGY CRISIS IS REAL.

At the request of Procurement, officials of the Aluminum Company of America visited Bethpage a couple of weeks ago for talks with top representatives of Grumman Corporation, Grumman Aerospace, and Grumman Allied Industries. The ALCOA officials spelled out how the energy crisis was affecting the aluminum industry . . . and how it might further affect Grumman in the future.

According to Paxson, Grumman is already experiencing the damaging results of the energy crunch: lead times on aluminum, titanium, steel forgings, bearings, couplings, petrochemicals — even such common items as asbestos gloves — have been stretched dramatically in the past few months and may widen even further in the future. Raw material shortages could result in a number of areas, he warns, and they in turn could cause serious product delivery delays.

"Fuel oil and electricity—as well as JP 5 for our aircraft—are already in short supply and must be conserved," said Paxson. "What's not as well known are the potential critical shortages in such things as pencils, papers, rags, etc. They also are in short supply and we're encountering increased prices and extended lead times when we try to re-order.

"Though we believe we've got good conservation practices at Grumman," Paxson explained, "they're not going to be good enough in the very critical period ahead. So we're rallying all the operating departments to join with us in initiating a comprehensive material conservation program to combat the effects of these stretched lead times, increased prices, and raw material shortages.

" 'Save material . . . save energy . . . save a job' might well be our company-wide rallying call, because it might get that critical," says Paxson. "One of the first things the Procurement De-

(Continued on page 7)

Ecosystems ready to begin $2 million construction job

Late last month, Grumman Ecosystems signed a construction contract worth nearly $2 million to upgrade the municipal sewage plant at Shelton, Conn.; and just two weeks ago, Executive Vice President Bill Schwendler announced that Ecosystems was low bidder on a $1 million proposal to update one of the incinerators at the Town of Huntington's waste disposal site in East Northport on Long Island.

At Shelton, Grumman Ecosystems, as general contractor, will construct a new control building, aeration tanks, clarifiers, sludge thickener, pump station, and incorporate various other modifications as designed by the consulting engineering firm of Philip W. Genovese & Associates. Tony Calagna of Grumman Ecosystems will be construction manager.

The new construction and design changes will not only increase the plant capacity from 2.75 million to 5.5 million gallons daily, but will also improve the sewage treatment from a primary to a secondary level. This will assure greater treatment of the muncipality's sewage prior to discharge.

Incoming sewage is treated by several stages. First, heavy solids are separated from the sewage in large tanks called primary clarifiers. The

(Continued on page 7)

Elect DeForest, DiFalco VPs at Data Systems

On November 19, the Board of Directors of Grumman Data Systems elected D. C. (Curt) DeForest and Dominic (Dick) DiFalco to vice presidencies in the Grumman Corporation subsidiary. In announcing the moves, GDS President Bob Nafis outlined DeForest's areas of responsibility as Commercial Services, and reporting to him are Network Services and Commercial Operations. DiFalco heads the Grumman Account, including Applications Software Development, Operations, and the Calverton Computing Center.

DiFalco took a short detour to Martin Company in Baltimore following his graduation from Fordham, but in 1958 Dick returned to New York and put his math degree to work at Grumman, initially in data processing on the Gulfstream I and A-6A (then A-2F) flight test efforts. Later, he became more heavily engaged in computing technology and programming during tours at the LM Data Reduction Station and as manager of LM Data System Software.

In January of 1970 when GDS was formed, he, too, moved along with

Dick DiFalco

most other computer specialists at Grumman to the new firm, and in September of that year he became head of Business Systems for the new subsidiary of Grumman Corporation. About a year ago, DiFalco was named to head "Grumman account" services —in other words, Dick is responsible for GDS living up to all of its contractual obligations for computing services to Grumman Corporation and its subsidiaries, with its main customer, of course, Grumman Aerospace. Included in DiFalco's operation are Computer System Operation and Production Software; Application Software Development; and Automated Telemetry Station.

DeForest, a C.W. Post graduate, joined Grumman in 1965 in the Systems Programming group (which was then part of Computer Sciences-Research). Subsequently, he worked on the Computing Systems Department staff and eventually joined the marketing group under then Vice President Bob Nafis when GDS was formed in January 1970.

At that time, while the major effort at GDS was directed toward providing data processing and other non-computing services to Grumman Aerospace, DeForest began to pursue commercial contacts. He discovered that there were many customers — even those who owned their own computers — who were willing to pay for fast response computer services. And his selling point was effective — Commercial Computing Services showed these potential customers how they could save money by reducing their fixed costs in maintaining in-house computers, and, at times, how they could eliminate that equipment cost by contracting with GDS to do all of their data processing.

It was a successful marketing ap-

Curt DeForest

proach: GDS Commercial Computer Services has grown from two people— one in customer services, the other in sales—to its present complement of 80, which includes 16 marketing people working out of three (soon to be six) district sales offices, 14 customer service representatives, and another 50 Grummanites managing and operating the two large scale computer systems that handle the local and remote commercial computer services.

The list of customers has also grown dramatically—from under 25 in 1970 to more than 200 at present. According to DeForest, an aggressive growth plan has been developed for 1974 that, if successful, will double the revenues generated by Commercial Computer Services in 1973.

Holiday Message

The year 1973 was a critical year for Grumman. The essential problem was the F-14 contract. But when that was resolved, hard as the financial loss was to accept, the tremendous production effort to supply the Navy began. The Tomcat, which means so much to our future, is going to be on schedule by year-end which is a fantastic achievement. This puts us in the solid position of producing a variety of planes where each is the standard of quality in its field.

Jack Bierwirth

Several weeks ago, Grumman Corporation announced a dividend for the first time since March of '72 —and though it was a modest one, its message was clear. Grumman, though not yet in blooming health, is certainly on the road to recovery. That recovery is due to the pride, hard work, and sacrifice of Grummanites in all parts of the Company. The defense and space portions of the Company grew stronger with each passing month. The commercial "side of the house" turned in solid increases in sales and profits during the first nine months while continuing to build our reputation. Around the world the name "Grumman" means quality and value whether you're talking defense aircraft, Gulfstreams, canoes, or computer programs.

In 1974, virtually in every operation, we are setting out to establish new bases of growth for the future. Some undertakings are ambitious, but the kind of effort being expended by the men and women involved is truly a promise of success in itself. There are other challenges, not of our choosing, which complicate the year: the fuel and energy shortages will soon be joined by spreading raw material shortages. Some of our products will be affected, and we will have to adjust. The high priority of our defense business is a great reassurance in times like this.

The year ahead holds every promise that it will contain all the challenge and excitement that any of us could ask for. The year past won't be remembered for its calm serenity either, but we got our opportunity and, thanks to all of you, seized it magnificently.

At this time, I would like to wish all of you and your families my very best for a happy holiday season and a healthy, peaceful, and prosperous New Year.

Jack Bierwirth

Discount sale on mini-calculators

Whether you're an engineer, accountant, investment consultant, or even a manager of home finances, there are several pocket calculators on the market that could help speed up your computations, and do it accurately, too.

Because of the amount of interest shown in these pocket-sized computers in recent months, Bruce Hausser, who heads Operations and Controls for Technical Operations Administration, is "taking orders" for three pocket calculator models—the HP-35 and HP-45, both scientific calculators, and the HP-80, designed for business computations.

According to Hewlett-Packard, manufacturer of the calculators, the HP-45 performs log, trig, and match functions 10 times faster than a slide rule—and with accuracy up to 10 digits . . . and nine memory registers . . . four operational stacks to hold intermediate solutions . . . two display modes . . . and error correction.

Hausser says that these calculators are available to Grumman personnel at a 10 percent discount at the following prices: HP-35 — list $295, discounted price $265.50, plus 7% sales tax, your price: $284.59. HP-45—list $395, discounted price $355.50, plus 7% sales tax, your price: $380.39. HP-80—list $395, discounted price $355.50, plus 7% sales tax, your price: $380.39.

This is a limited offer between December 17, 1973 and January 18, 1974, says Hausser, and a bank check or money order made out to Hewlett Packard must accompany your order. No cash will be accepted. Delivery should be made in three to four weeks after the total order has been placed with the manufacturer. All checks and questions should be directed to Bruce Hausser, Operations and Controls, Plant 35, Ext. 9492.

You gotta' believe. **Some months ago, it seemed virtually impossible to a lot of people that F-14 No. 58 could be final-assembled and flown before year's end. But at Calverton, a lot of believers made it happen, and '58', their pride and joy, was delivered from Plant 6 to Plant 7 a couple of weeks ago where it is scheduled for flight momentarily. Marking the event—and representing all those other believers—are Capt. Bob Belter, Vice President George Skuria, general manager of Calverton Operations, Larry Damiani, Ed O'Donnell, Vin Valetutti, Frank Leone, Joe Albanese, Tom Merritt, Bill Merrell, and Frank Messina.**

United Fund tops campaign goal; donors here pledge $400,000

Topping its 1973 campaign goal of $3.1-million, the Long Island United Fund raised a record $3,103,408 in monies and pledges this year.

A total of $407,287 was pledged by the Grumman people to the United Fund to assist in the financial needs of the 97-member agencies and hospitals in Nassau and Suffolk counties.

A drawing was held recently for the 24 prizes donated by the company.

The lucky winners were:

LOIS WATKINS, Medical, Plant 28 - Magnavox 25 in. color TV combination.

ED BURKE, Engraving, Plant 3 - Sylvania 25 in. color console TV.

ALEXANDER McASLAN, Plexiglas, Plant 27 - Sylvania 25 in. color console TV.

VIOLA DRINKWATER, Insurance & Records, Plant 27 - G.E. 25 in. color console TV.

FRANCIS A. POWERS, Personnel Admin., Plant 28 - Admiral 19 in. color TV w/remote control.

THOMAS WATSON, Personnel Admin., Plant 6 - Pioneer 120 watt amplifier w/BSR turntbl., w/ pair of Pioneer Superdynamic spkrs.

DENNIS WIEDERKEHR, Machine Shop, Plant 56 - Sylvania 18 in. portable color TV.

JOHN CRAWFORD, Tool Control, Plant 2 - Magnavox stereo sound system.

JANET WOLFRAM, Pricing & Resources, Plant 40 - Frigidaire skinny-mini washer-dryer.

FRANK KREPELA, Flight Operation, Plant 7 - G.E. 24 cu. ft. refrigerator w/ice crusher & ice maker on door.

THOMAS SIMKEN, Elec. Fab., Plant 7 - Sylvania stereo console am/fm.

MIGUEL RAMAS, Mec. Struct. & Proto., Plant 5 - Westinghouse duplex refrigerator-freezer.

CHARLES MACIARZ, Spotwelding, Plant 2 - Sony 15 in. color TV.

RALPH BROOMFIELD, Vehicle Prod. Eng., Plant 3 - G.E. port-a-color TV.

JOHN PALLMAN, Maintenance, Plant 2 - G.E. 18 cu. ft. frost-free refrigerator.

MARCELLO VICI, Systems Integ., Plant 1 - G.E. Americana range.

CHARLES ANDERSON, Prod. Release, Plant 1 - G.E. dishwasher.

VIVIAN DOOLEY, Requirements Planning, Plant 30 - G.E. 23 in. black & white TV.

JOHN STIERS, Press, Plant 2 - G.E. upright freezer.

ANKER PETERSON, Flight Avionics, Plant 5 - Pioneer 70 watt amplifier w/BSR turntbl., one pr. Creative spkrs.

JOHN MITZGER, Pt. Mugu - Engineering, Plant 88 - Whirlpool automatic washer.

FRANK ANZILLATTO, Router & Shear, Plant 37 - G.E. 30 in. electric range.

DANIEL ZEBART, Fuse. Fwd. Sub. & Major, Plant 1 - G.E. 16 lb. auto washer.

JOSEPH D. ABEL, Pre-flight Fin./Sys. Install., Plant 6 - Caloric 30 in. gas range.

Name Jessberger, Sargent VPs in Ecosystems realignment

On November 19, as part of a realignment within Grumman Ecosystems Corporation, the Board of Directors of the Grumman Corporation subsidiary elected two officers in its Pollution Control Division: Clifford F. Jessberger, Vice President-Operations, and Edward A. Sargent, Vice President-Sales.

In announcing the moves, Executive Vice President Bill Schwendler noted that the restructuring within Ecosystems is expected to achieve better management control and market penetration by the company in the pollution control field. "Jessberger is now in charge of all operations in Ecosystems' Pollution Control Division, including engineering, estimating, construction management, products, and systems development," said Schwendler. "Sargent is directing all of our sales activities in the pollution control division in addition to his continuing responsibilities as president of Ecosystems' subsidiary, Scientific Ecology, Inc."

Jessberger and Sargent have brought to Grumman Ecosystems extensive experience in the field of industrial and community pollution control, areas in which Ecosystems is heavily engaged.

Cliff Jessberger has been president and general manager of Puritech Industries, Inc., an Ecosystems subsidiary, where he is involved in the design and construction of facilities for treatment of water, sewage, and industrial waste. He began his career at Pratt & Whitney in nuclear engineering following graduation from the Polytechnic Institute of Brooklyn with a bachelor's degree in Chemical Engineering. (He also did graduate work at BPI, and later, in 1962, earned an MBA from the University of the City of New York.)

Following a four-year stint at Foster Wheeler Corporation (1957-61), where, as a sales engineer, he was engaged in the design and proposal of power generation and nuclear process components, Jessberger formed his own marketing and consulting services corporation — Tripex, Inc. — serving as president until 1965. He then became chief executive of General Process/ Tripex where he held wide responsibilities in the design and construction of small domestic and industrial waste treatment plants, contract maintenance and operation of sewage treatment facilities, and the financing and leasing of sewage plants.

In May '72, he became a consultant to Grumman Ecosystems in the sanitary and industrial waste water field, and, after joining Puritech later that year, was elected president of Puritech in July of 1973.

Cliff Jessberger

Ed Sargent

Innovative approach

Ed Sargent has been president and general manager of Scientific Ecology, Inc., also a Grumman Ecosystems subsidiary. He has headed an effort directed toward the design, construction, and operation of solid and gaseous waste treatment facilities. Sargent graduated from Duke University in 1942 with a degree in Mechanical Engineering. After taking graduate studies at Ohio State University, he founded Sargent, Inc., in 1945. The firm was known for its innovative approach in the incineration field and in the manufacture of refractory lined chimneys and vent ducts and small automatic municipal incineration plants. In recognition of his efforts, he was chosen as president of the Incinerator Institute of America from 1961-63.

Sargent served as president of Sargent, Inc., until 1964, then acted in the same capacity—as well as group vice president — for the Sargent-NCV Division of Zurn Industries, Inc. In 1970, after leaving Zurn, he founded and was elected president of Scientific Ecology, Inc. Ecosystems acquired Scientific Ecology early in 1973 and has since operated it as a subsidiary.

Now for the bad news . . .

Grumman Aerospace employees shouldn't be alarmed next year if the FICA tax deduction reported on their paycheck stub varies by one penny.

According to Deputy Director of Payroll Sam Piazzola, the computer will be rounding off FICA taxes. "The variation," he says, "will never be more than one penny and we will never take out more than the law requires."

Piazzola also says this is a good time to remind all employees that the FICA tax deduction begins again on January 1, so be ready for smaller paychecks for a while.

the winning team

PATUXENT RIVER, MD.—It was all over but the party. The team for the E-2C—the current version of the Grumman Hawkeye series of airborne early warning aircraft—had been at the Naval Air Test Center in Patuxent River, Md., since May. The aircraft had completed the Board of Inspection and Survey (BIS) trials where it functioned for the first time in an operating environment. Some of the men had been with the BIS team from the beginning, others only a few weeks; now they were ready to return to Bethpage. They were having a final "happy hour" together, not to say goodbye, but to compliment each other on the completion of an important job well-done.

It was a time for reminiscing, about the 24-hour days and seven-day workweeks; about problemsolving, like the big one dealing with the tactical software; about the loneliness of being separated from families; the logistics, communications and "yellow sheets"; the nearly 300 flights and some 1,000 flight hours (half the total accumulated during the entire E-2C development); about the 2,000 materiel pieces that "flowed" between Bethpage and Pax River; and about some solid friendships with Navy personnel they wouldn't be seeing for a while, at least not on a daily basis.

The group was small; many of the BIS team members, like Don Walsh, Jerry Norton and Don Fish, had already returned to Bethpage. Those still remaining—like Jade Schultz, a weapons systems specialist; Ron Bies, a radar engineer who has flown more than 1,000 hours in the E-2C; Bill Thorn, an instrumentation technician; Larry Michelon, flight test manager; Willy Newman, a plane captain; and Art Reill, manufacturing engineering manager—formed an amiable group, most of whom had worked together on other assignments over the past decade.

The most conspicuous member was Jim Philbin, the BIS director, whose six-foot, four-inch stature makes him a

standout in any crowd. "The objective of BIS is not to 'not have problems,'" Philbin explained. "It's actually to float out and correct any problems and performance deficiencies that don't meet the aircraft's specifications or that are not operationally compatible. Even if we meet every specification that's set up for various contractural purposes, the aircraft still has to meet the operational requirements and objectives for a successful BIS trial. Our primary purpose, therefore, is to put the aircraft through all of its paces in a mission-type environment, including some flying performance and special avionics tests. The results, of course, lead to the longevity of the aircraft and to the follow-on buys in the future which are heavily influenced by the BIS trials."

Grumman's role at BIS has been one of "fully augmented support" in which the Grumman team does the maintenance to keep the planes flying while the Navy personnel operate the aircraft, put them through comprehensive operational evaluations, including reliability and maintainability tests, and work along with the Grumman people in a kind of on-the-job training environment.

The BIS trials commenced last spring when the first E-2C arrived at Pax River. Two more E-2Cs arrived in June while the fourth—A-2, the most complete E-2C configuration tested at BIS—arrived in October. Personnel build-up was gradual, reaching a peak of about 75 men by midsummer.

Prior to BIS, Grumman had conducted extensive training of Navy personnel and for two-and-a-half years, the E-2C had undergone extensive development. "Since its successful first flight in 1971," Plane News reported last April, "the E-2C has passed numerous significant milestones, including all varieties of Navy evaluations (such as 'fly-before-buy,' DSARC, NPEs and the like); various in-flight radar navigation tests; many reliability and maintainability evaluations; and the first successful test flight of a production plane of the E-2C vintage last fall."

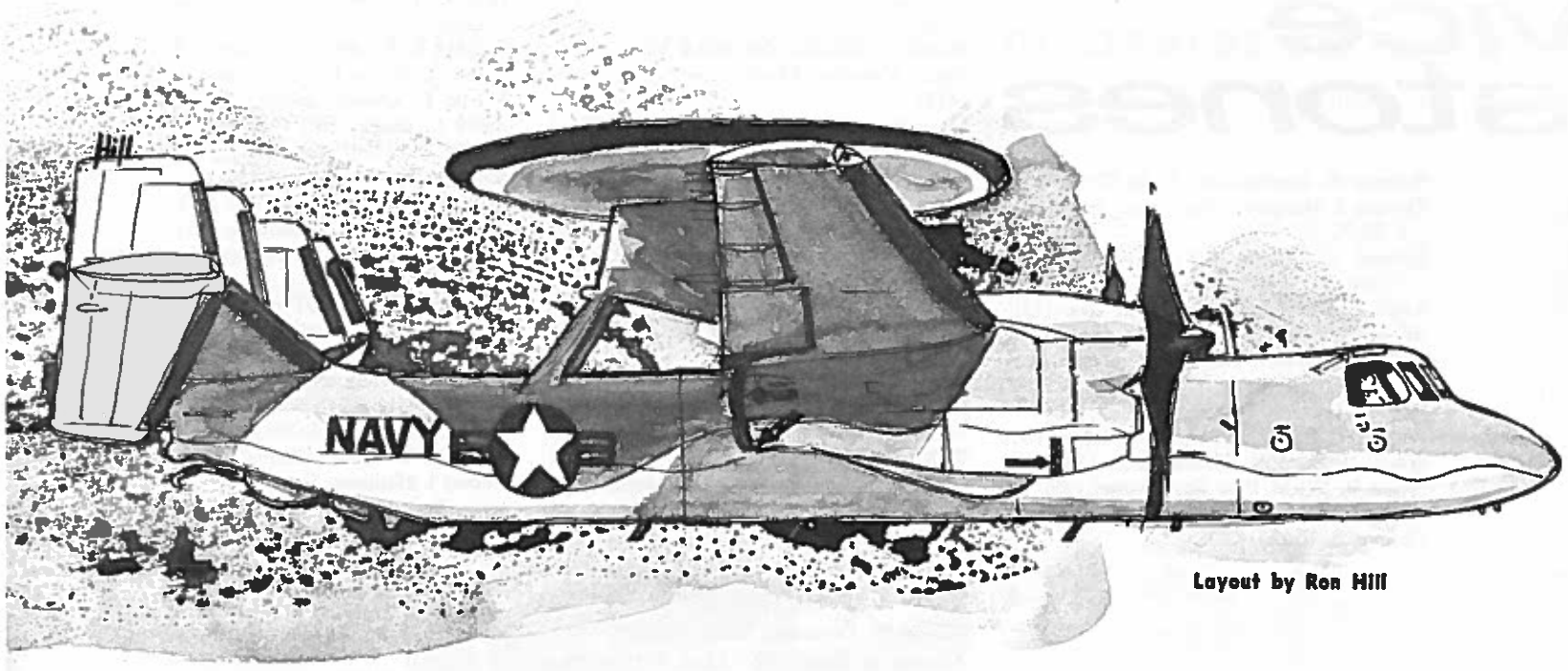
The E-2C still reigns as the most densely packed avionics package

Grumman has built, carrying some 10,000 pounds of avionics equipment. Its three major thrusts over its predecessors are: a passive detection system; increased reliability over the E-2A and the E-2B; and its limited overland radar detection capability.

Philbin readily admits that at BIS Grumman's key resource has been its people, whom he describes as a closely knit, cohesive team consisting of a relatively small number of people who have been able to support very complicated weapons systems. "Our people, for the most part, are self-motivated, they have worked long hours at great personal sacrifice and they have been able to accomplish an enormous amount of work," says Philbin.

"Under the pressure-packed climate of BIS, we have used what we call a single-point management system in which we have given each man a great deal of responsibility and the latitude to get his job done. This method is compatible with on-site decision-making and has led to a tight communication system and the ability to get to the source and respond to needs quickly. The response and motivation of our people to this kind of system is reflected in the sheer number of flights and flight hours and the healthy attitude of our people here toward their work."

A typical day last summer when as



Layout by Ron Hill

many as three BIS aircraft were operating at Pax River began at 8 a.m. with the launching of two E-2Cs for five-hour test flights. Recovery was at 1 p.m., followed by a two-hour turnaround, the second launching of two more planes, and final recovery about 8 p.m. On some days, a fifth plane was launched.

Logistics was no small matter, either. Maintenance of the E-2C is as complex as the equipment the plane carries and the manufacturing personnel had four sets of avionics systems to maintain. With two sets of launches a day, maintenance was a round-the-clock operation with most of the heavy work done at night.

Explains Art Reill: "Our objective has been to get each aircraft into the air to meet the Navy's requirements as fast and correctly as possible. All spare and replacement parts had to be flown or trucked daily from Bethpage while the parts we removed from the planes had to be returned to Bethpage for repair and return to Pax River. Close to 2,000 major materiel pieces flowed during the BIS time period, ranging from tiny seals to black boxes to a complete engine we had to replace on one plane. Grumman pilot Dick Sprague flew some 400 hours for us during the BIS period carrying most of our parts and some 300 personnel a month. At times, though, we called on Grumman pilots with private planes—like Don King and Ernie Von der Heyden—for assistance in "emergencies."

The major categories of work performed at BIS included: overwater detection and tracking in normal and degraded modes of operation; overland detection and tracking in which software plays an important role; operating in a near-land detection environment, approximately 60 to 110 miles offshore, including limited overland tracking within a highly restricted area; data link work with the F-14 and tests with operational fleet surface units and existing fleet facilities; passive detection; intercept patrol evaluations; crypto equipment testing; extensive maintainability and reliability evaluations; both catapult shots and arrestments; and carrier suitability testing for both demonstration purposes

and to check system performances.

In retrospect, while the BIS trials have been succesfully completed, those involved are the first to admit that there were some uncertain moments. Perhaps the most taxing had to do with tactical software in which the BIS team had to define the problem and correct it in an orderly and effective manner. The result, however, is an improved, satisfactory and very stable system which is the "type of response you look for at BIS."

Another aspect that led to the success of the trials was the training that was conducted before any aircraft were delivered to Pax River. At Bethpage, for instance, an extensive training effort was conducted last year for the Navy team, some of the members of which were also members of previous E-2C evaluation teams. Among the Navy's mainstays at BIS were Lt. Tom Bunge, Lt. Al Skroch, Lt. Cdr. Dan Daly, Lt. Dick Keefer and Warrant Officer J. J. Worbiscus. Lt. Rick Lundy, from NAVPRO in Bethpage who flew the E-2C during the development phase, was a BIS team member. Capt. Ken Melin was BIS director and Maj. Kent Johnson, assistant director. Cdr. Jim Fannon was the BIS team

leader and Lt. Cdr. Nelson Orth was a primary team member. Roger Frost, a civilian, was the Navy's BIS program engineer, and Cdr. Al Dunaway served as the E-2C program manager on the staff of Adm. Iseman, commanding officer of the NATC at Pax River.

Tom Guarino, Grumman's E-2C program director, says he personally gives everyone on the Grumman team an earnest "well-done". "This was one of the best Navy-contractor BIS teams ever assembled," Guarino says. "The job was handled by pros and the results reflect their high degree of professionalism."

Two of the BIS aircraft have already been delivered to training squadrons in Norfolk, Va. One is at Bethpage awaiting deployment to a squadron. And the fourth was taken to Pt. Mugu, Calif., for three weeks where it was tested in the climatic chamber in temperatures ranging from 190°F. to -60°F. Larry Michelon accompanied the plane on its cross-country flight to observe overland testing and collect data en route.

What next? The next major milestone will be the deployment of the E-2Cs to fleet operating units in May or June. Between now and then, the E-2C teams will concentrate on updating the equipment in the planes, outfitting the carrier that will support the first E-2C and training the pilots and Naval Flight Officers.

The party that night on the eve of wrapping up the BIS trials at Pax River was in preparation for only a brief parting. The E-2C work goes on. The BIS team will resume its work in other parts of the E-2 community. The big trials are now behind them. They will soon concentrate their efforts on the first E-2C operational deployment this summer. And when that occurs this same team might well be reunited at the Naval Air Station in Norfolk, Va.

And that's a winning team.

service milestones

35

George R. Miller, Sub-Assembly (1)
Erwin A. Jansky, Planning (2)
Henry C. Grau, Die Shop (2)
William M. Zarkowsky, Vice Chairman, Grumman Aerospace

30

Warren Maurer, PPO- F-14 (1)
Edward C. Haroff, Tool Maint.-Repair (1)
John P. Jones, Q.C. Prog. Mgmt A/C (1)
Clarence D. Thorpe, Small Parts Fab. (2)
Angelo R. Crotti, Small Parts Fab. (2)
William G. McAvoy, Insp.-Mech. (3)
John W. Davidson Jr., Prod. Control (4)
Adam C. Schubert, Prod. Mgmt. (6)
Frederick E. Seymour, Loads & Criteria (15)
Anthony Scarpinato, Ctr.-Sub-Assembly (27)
Joseph T. Fuori, Q.C. Supplier Control (87)

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William Birmingham, Sub-Assembly (1)
Robert A. Walters, Sub-Assembly (1)
John Mauser, Small Parts Fab. (2)
John A. Grodeski, Drop Hammer (2)
William J. Stumpf, Heat Treat (2)
Francis S. Walkowski, Plant Stores (2)
Rudolph Illg, Jigs & Fixtures (2)
August W. Bilzi, Assem. Tool & Hand Equip. (2)
Charles W. Gosline, Fluid & Mech. Tool & Equip. (2)
George A. Bleakley, Wing Sub-Assemb. (3)
Edward J. Kavanaugh, Wing Sub-Assemb. (3)
Gabriel B. Grenci, Contracts A/C (5)
Vincent J. Scheer, Inventory Control (6)
Robert F. Kingston, Inventory Control (27)
Stephen T. Mauriello, Maintenance (36)
Edward J. Murray, Employee Services (36)
Stephen E. Wismann, Fuselage Assem. (77)
Nelson C. Cooper, Production (88)

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William E. Carley Jr., Fluid Power (1)
Bernard Rydout, Tech. Directive (1)
Robert D. Bell, Mfg. Inspect. Mech. (1)
Albert F. Fischer, Config./Data Mgmt. (1)
Fred C. Tomner, Templates (2)
Norman A. Burtch, Aircraft Prog. (4)
Stanley A. Angur, Ops. Anal. & Plng. Research (5)

Norman N. Lewin, Syst. Tech. (5)
Thomas J. Haggerty, Sys. Integ., Inter. Con. & EMC (7)
Edward C. Platto, Air Traffic & Radio Comm. (7)
Ralph E. Olsen Jr., Power Plant Des. (15)
Albert Termin, P/S Mech. Engg. Mgmt. (25)
Werner H. Nufer, Guid. & Nav. Syst. Des. & Anal. (25)
William J. Sloan, Materials Acctg. (30)
Thomas B. Street, EA-6B Prog. Mgmt. (34)
Robert B. Sanders, Systems Des. (35)
Jurgen R. Wiehl, Pwr. Distribution (35)
Robert C. Weston, Systems Sci. (35)
Thomas S. Roche, GDS

15

Louis Baldassin, Equipment Lines (1)
Norman D. Neilsen, Equipment Lines (1)
William J. Stumper, Electro-Mech. Des. Proced. (1)
Arthur L. Wilson, Veh. Prod. Engg. (1)
Philip Vassallo, Mach. Oper. Management (2)
Maria J. Manganis, Inventory Control (2)
Frederick M. Verity, Maintenance (2)
Dominick Perricone, Drafting (2)
Gerard Pless, Drafting (2)
Vincent A. Ciampa, Mach. Ops. (3)
George Wright, P/S Tech. Serv. (4)
Mario DiDomenico, Flt. Avionics (53
Anthony F. Borg, Avionics (5)
Nicholas Haridopolos, Tool Des.-Elect. Tech. (5)
Virginia Galasieski, Secretarial Serv. (5)
Joseph M. DeMasi, Ops. Anal.-Planng. Research (5)
William E. Holmes, Insp.-Elect. (5)
Charles E. Harrison Jr., Prod. Control (6)
Floyd T. Bauer, Prod. Release & Anal. (6)
Francis R. Sheedy, Indust. Engg. (6)
Vincent J. Sottile, Veh. Prod. Support (6)
George B. Michos, Flight Sci. (7)
George T. Demarest, Elect. Test (7)
Armand A. Small, Adv. Matl. & Proc. Dev. (12)
Carl Micillo, Adv. Matl. & Proc. Dev. (12)
George L. Zeman, Lab. Mgmt. (14)
Donald H. Price, Performance (15)
Gerard D. Optring, Transportation (20)
Herman J. Scherdel, Environ. Contrl. Des. (25)
Herman L. Prager, Crew Syst. (25)
Arthur J. Jacobs Jr., Crew Syst. (25)
Martin D. Olstad, Systems Des. (25)
Allan L. Cooley Sr., Pwr. Gener. & Conv. (25)
Solomon Boxer, Drafting (25)
Edward C. Greiner, Drafting (25)
Walter M. Grechen, Drafting (25)
Frank R. Swanson, Nuclear-Astrophysics (26)
Henry J. Vroom, Pt/Proj. Engg. (30)
Joan T. Leggio, Invoice Audit (30)
Guenther J. Bauer, Environ. Cntrl. Des. (35)
Arthur M. Frank, Alg. & Cr/Arm. Pyrotech. Syst. (35)
Clarence E. Wenzel, Personnel Mgmt. (35)
James V. Tambini, P/S Field Serv. (35)
Robert J. Halloran, Est./Pricing (35)
Jerry Budowle, Grumman Corp.
Rudolph C. Thunquist, GDS

W. Birmingham | R. A. Walters | J. A. Grodeski | F. S. Walkowski

R. Illg | A. W. Bilzi | C. W. Gosline | G. A. Bleakley

E. J. Kavanaugh | G. B. Grenci | V. J. Scheer | R. F. Kingston

S. T. Mauriello | E. J. Murray | S. E. Wismann | N. C. Cooper

OBITUARIES

SAM HOENIG of Small Parts Fabrication, Plant 2, died November 26 at the age of 55. He had been with Grumman Aerospace since 1951 and lived at 248 Stratton Ave., Lynbrook.

GUSTAVE ELIAS of Avionics, Plant 5, died November 30 at the age of 56. He had been with Grumman Aerospace since 1972 and lived at 147 Ave. East, Holbrook.

CHARLES ZITTER of E-2C Wings, Plant 77, died at the age of 53 on November 30. He had been with Grumman Aerospace since 1965 and lived on Route 2, Ft. Pierce, Fla.

SIDNEY KUTEL of P/S Digital Engg., Plant 5, died December 1 at the age of 55. He had worked at Grumman Aerospace since 1972, and lived at 18 Fourth Place, Syosset.

FRANK J. CASIGLIA of Drafting, Plant 1, died December 2 at the age of 57. He had been with the Company since 1962 and lived at 223 North Maple St., No. Massapequa.

RALPH STUYVESANT of Maintenance, Plant 6, died December 5 at the age of 61. He had been with Grumman Aerospace since 1957 and lived at 88 Franklin St., Patchogue.

HENRY E. JOHANSON of Auxiliary Systems, Plant 14, died December 7 at the age of 56. He had been with Grumman Aerospace since 1961 and lived at 11 Cornfield Lane, Commack.

Personal

Mrs. Anthony Oddo would like to extend her sincere appreciation for all the kindness shown her during her recent bereavement by the many friends that her husband Tony had at Grumman.

plane GRUMMAN news

Published twice a month for the employees of Grumman Corporation, Bethpage, N. Y. 11714, as a function of the Public Affairs Dept., Vice President J. B. Rettaliata, director.

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Call for stringent conservation measures to offset shortages

(Continued from page 1)
partment has done is to mount an all-out effort to improve the accuracy of bills of materials, refine our controls of min-max hardware, and improve the handling and cycling of material to minimize damage and loss. We must all do a better job in conserving our industrial material resources and in eliminating waste."

One of the key areas in which to carry out that suggestion, says Lew Scheuer, director of Program Procurement, is in the handling of expensive and complex major equipment. "About 50 percent of every contract dollar awarded to Grumman is spent on procurement—and to give you an idea of how expensive the black boxes we buy are, some are worth the dollar equivalent of a family's home and car combined. So, if you handle black boxes in your work, treat them with special care. And if you have problems with them, don't delay; use the experts who are available to correct system malfunctions.

"Repairs can sometimes mean shipment across country; that's costly in time, fuel, and money. So we must work closely with our suppliers to make sure that their first delivery on a specific item is their last. That requires diligence on the part of a lot of people — suppliers; procurement and quality control to make sure we get the quality subsystems we're paying for; warehousing and production in handling and installation of complex black boxes; and also the various professional disciplines at Grumman to be sure that our requirements, test programs, and handling are accurate and precise, and neither over- or understated. Each of us has a very personal stake in the delivery and performance of these complex equipments," said Scheuer. "If they're not working, we can't deliver aircraft to our customers —and everyone knows what that will mean."

Will the situation improve soon? Not likely, says Monahan. As he sees it, "We can expect material availability —the possibility of shortages, in other words—to get worse for some time before there's any chance of it getting better. Material is much like energy—there's just so much of it to go around. It's not a question of being willing to pay higher prices; *getting* the material is the problem."

More care in handling

Because of that, cautions Al Schuckle, director of Inventory Management, there must be even more care in the handling of material. "The dropped rivet or lost fitting may not be replaced for months," he warns. "And because it takes so long to get material, we in Procurement are working closely with Engineering, Product Support, and Manufacturing to speed up and simplify certain vital information—bills of material, for example—so that material requirements can be established much earlier. We're also working with Engineering and Manufacturing to improve our ability to forecast more accurately our need for do-not-requisition (DNR) material. In these ways, we can determine our needs quicker, order earlier, and have the parts available when production needs them."

Schuckle has these added suggestions on how to conserve material and eliminate waste:

- Requisition only what is required, from paper to solenoids.
- Keep material moving! Install it or return it to stock, or, if it is damaged, return it to Repair Control.
- Process discrepant tagged material immediately. Remember, it takes more time to repair or replace it if you don't.
- Pick up all "dropped" hardware —screws, bolts, rivets, and even paper clips—even if you didn't drop them yourself.
- Exercise extraordinary care in opening containers and in handling equipment to prevent damage or loss.
- Order only those reproduction copies, forms, computer printouts, and blueprints necessary to do the job.

So the message is clear. The energy crisis and the resultant material shortage are producing very serious ramifications on industry — and, more specifically, on Grumman. Paxson believes that if we are to survive this period, conservation must be more than just a word — it must become a way of life.

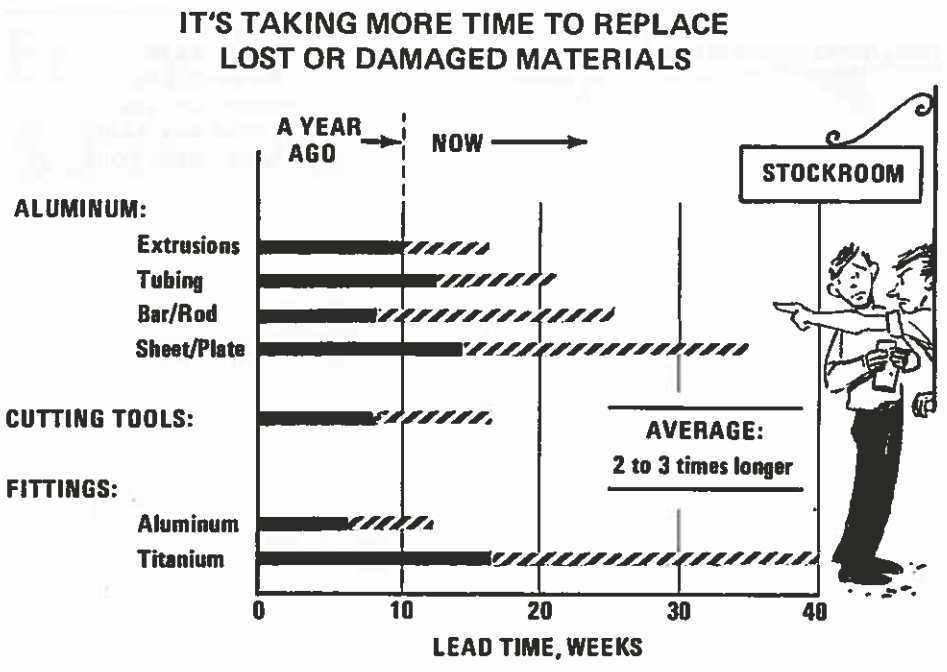
"If everyone would adopt these conservation habits," says Paxson, "we would not only be boosting our present programs, we would be assuring consideration for future business. Each of us must be willing to initiate a self-imposed, rigid, conservation effort. That's one of the ways we can have continued employment, job and business security. Only through such a concerted effort," Paxson says, "can we continue to deliver on schedule, be competitive, and provide our customer with the best quality at the lowest possible price. Remember, 'Save material . . . save energy . . . save a job'!"

Rescue team. On Dec. 1, the quick response of an E-2C team and a precarious touchdown in heavy seas by a Grumman Aerospace helicopter crew are credited with saving the life of a National Guard pilot downed in the Atlantic. Pictured above are the E-2C crew members: top - Cdr. Les Berglund of NAVPRO and Grumman pilot Al Hendershot; bottom - AT1 Dale Barhan and Lt. Cdr. Mike Ungerman of NAVPRO. (Photo by John Boles)

Ecosystems signs $2 million contract

(Continued from page 1)
sewage is then sent to another set of tanks (aeration tanks) where air is injected to support the bacterial action which further purifies the water. The processed sewage is now sent to final clarifing tanks to remove the remainings solids and then chlorinated for disinfection. The solids which are collected in the several clarifiers are pumped to disgesters, which biologically treat the solids, and to a thickener, which concentrates the solids for further volume reduction. Work on the $1,955,610 contract is expected to begin this week.

At Huntington, Ecosystems turned in a low bid of $1,030,870 to make certain improvements on the existing Incinerator No. 3 at East Northport so that it will conform to the N.Y. State pollution code. Contract signing has not yet been scheduled. Ecosystems also bid $236,290 on supplemental work at the site, but the Town has not yet decided whether to proceed with this additional work.



Encourage mass transit, car pools to beat gas crisis

Many people on Long Island and across the nation are feeling the "energy crunch." Before long, there will most likely be a shortage of sweaters, electric heaters, and longjohns. And the price of gasoline is soon to rise again, with possible gas-rationing projected for the spring.

During September and October, Tom Lashinsky, director of Grumman's Traffic Department, and Bill Voorhest, co-director of the Opportunity Development Department, began an investigation of transportation services available to Grumman employees—the Long Island Railroad, Nassau County bus transportation, and the initiating of a company-assisted car pool service.

It is a well-known fact that the majority of Grummanites drive automobiles to and from work. The use of so many cars creates parking problems at Grumman, adds to road congestion, increases air pollution, and creates an increasing demand on the dwindling fuel supply . . . and people's wallets.

If enough people show an interest in mass transit to and from Grumman, there are several new programs that could be initiated, says Tom Lahey, Assistant to Grumman Aerospace Board Vice Chairman, Bill Zarkowsky.

At present, the Long Island Railroad trains make only two stops at the Grumman station each day. Fifteen people take the train to work in the morning and only two hop the train in the evening. (The other thirteen?—they probably hitch rides with fellow workers.)

Just think of the advantages of becoming a "Dashing Dan" commuter: you don't have to sit on the L.I.E. "parking lot" for hours, you can catch up on the books you haven't read in a decade, and you get a chance to save gas for those leisure trips.

If enough people show an interest in becoming LIRR commuters, the railroad might add additional stops at the Grumman station; Grumman could also initiate a bus service from the Bethpage station to the Bethpage plants.

If you don't have a love of the rails, how about the Nassau County bus service? The service is rapidly expanding its transportation system and if enough people leave the driving to the Suburban Mass Transit Authority, Grumman will supply its own bus service from the bus drop-off terminal outside the gate to the various Bethpage plants, promises Lahey.

As for the bus service, many bus routes pass through the Bethpage-Hicksville area, and the buses could be re-routed to make a stop outside the gates of Grumman.

For those of you who are not fully aware of existing bus service in Nassau, here is an example of what it would presently take for some Grummanites to get to and from work.

BUS ROUTE N-72B

LEAVE: Hempstead Bus Terminal	6:30 AM
ARRIVE: Stewart & Central Ave.	7:04 AM
LEAVE: Stewart & Central Ave.	3:53 PM
ARRIVE: Hempstead Bus Terminal	4:25 PM
OR	
LEAVE: Stewart & Central Ave.	4:53 PM
ARRIVE: Hempstead Bus Terminal	5:25 PM

This bus stops -
California Avenue & Fulton Avenue, Hempstead
Merrick Avenue & Hempstead Turnpike
Newbridge Road & Hempstead Turnpike
Division Avenue & Hempstead Turnpike
North Wantagh Avenue & Bryant Street

FARE: Hempstead - Bethpage - 65¢ one way
$6.50 weekly

The Suburban Mass Transit Authority is willing to make schedules and stops more compatible for Grumman employees if there is enough interest generated. In addition the company is investigating bus transportation between Bethpage and Calverton and bus transportation between Suffolk County and Bethpage. But these programs will not be initiated unless there is substantial response from people who wish to take advantage of the mass transit transportation available to them.

So, you still like to drive the automobile you say? How about meeting some of your fellow workers living in your neighborhood? An excellent way to save on gas consumption is a car pool, or taking a rider to work with you. The ESO office in Plant 2 is presently setting up an information service for those who care to double up on the use of the auto. They will try and assist you in finding a ride, a rider, or in setting up a car pool.

You can show interest in these proposed programs by filling out the forms on this page. In the long run, you will personally be fighting the energy crisis.

TRAIN & BUS SERVICE

Train ..... Bus .....

Name .....

Address ..... Town .....

Plant ..... Dept. ..... Phone Ext. ..... Shift .....

Send to: Tom Lashinsky
Traffic Dept.
Plt. 17 Dept. 176

CAR TRANSPORTATION

Rider Wanted ..... Car pool ..... Ride Wanted .....

Name .....

Address ..... Town .....

Plant..... Shift..... Phone Extension.....

Send to: Gus D'Errico
ESO
Plant 2

A job well done. Pete Nakelski (C) of Grumman American was recently commended for his outstanding performance while on temporary duty for Grumman Aerospace with the U. S. Navy Fleet Tactical Support Squadron Fifty in the Philippines by the commanding officer, Capt. J. D. Adkins. Now back in Savannah at his post in Quality Control, Nakelski accepted the award from Al Lemiein (L), Vice President and General Manager at Savannah, and Dinny Gagnon (R), manager of Quality Control.

GRUMMAN AEROSPACE CORPORATION
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